ACCESSION NR: AT4002916   S/3037/63/002/000/0100/0119

AUTHOR: Valeyev, K. G.

TITLE: Linear differential equations with sinusoidal coefficients and constant delay argument

SOURCE: Kachestvenny*ye metody* teorii nelineyny*kh kolebaniy. Mezhdunarodny*y simpozium po nelineyny*m kolebaniyam, Trudy* Kiev, 1961. Trudy*, v. 2, 1963, 100-119

TOPIC TAGS: linear differential equation, equation with delay argument, equation with sinusoidal coefficients, double matrix series, matrix continued fraction, series convergence, continued fraction convergence, characteristic exponent

ABSTRACT: Fifteen systems of linear differential equations with sinusoidal coefficients are considered. For the representation $F(\rho)$ corresponding to the Laplace transformation of the solution $Y(t)$, a system of linear difference equations is formed, and the solution of this system is obtained in the form of a double matrix series. The isomorphism between generalized numbers $[x, \sigma]$ and the terms of the series is established. The relations for the generalized numbers give the corresponding relations for the series terms, and so the series of $F(\rho)$ is transformed into matrix continued fractions. These fractions and the series $F(\rho)$

Card 1/2

ACCESSION NR: AT4002916

itself converge over the whole complex plane ρ. Convenient formulas are given to obtain the original Y (t) from the representation F (ρ). An equation is derived to determine the characteristic exponents of the solution Y (t) or the singularities of the transformation F (ρ). Systems of linear differential equations with sinusoidal coefficients and constant delay argument are considered in a similar way, resulting in a general representation of the solution Y (t) of linear differential equations with periodic coefficients and constant delay argument is given. The stability of some illustrative special systems of differential equations is investigated. "In conclusion, I would like to thank Prof. A. I. Lur'ye for his help." Orig. art. has: 137 formulas.

ASSOCIATION: none

SUBMITTED: 00   DATE ACQ: 20Dec63   ENCL: 00

SUB CODE: MM   NO REF SOV: 005   OTHER: 002

Card   2/2

L 13069-63   EWT(d)/FCC(w)/BDS   AFFTC   IJP(C)

ACCESSION NR: AP3000950   S/0140/63/000/003/0019/0022

AUTHOR: Valeyev, K. G. (Leningrad)   57   16

TITLE: Construction of solutions of a system of linear differential equations in the neighborhood of a regular singular point

SOURCE: IVUZ. Matematika, no. 3, 1963, 19-22

TOPIC TAGS: differential equation system, regular singular point, Laplace transform

ABSTRACT: Construction of solutions of a system of differential equations in a neighborhood of a regular singular point is accomplished by making an exponential change of variable and making use of Laplace transform to obtain a solvable system of difference equations whose solution is theoretically invertible, using one of the standard inversion formulas. "In conclusion I thank Professor A. I. Lur'ye for his attention and help in this work." Orig. art. has: 25 formulas.

ASSOCIATION: none

SUBMITTED: 12Apr60   DATE ACQ: 12Jun63   ENCL: 00

SUB CODE: 00   NO REF SOV: 001   OTHER: 001

Card 1/1

VALEYEV, K.G. (Leningrad)

Stability of solutions of a second-order linear differential
equation with periodic coefficients and a retardation of the
argument. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr.   no.3:
161-162 My-Je '63.   (MIRA 16:8)
                      (Differential equations, Linear)

VALEYEV, K.G. (Leningrad)

System of linear differential equations with simple harmonic
coefficients. Izv.AN SSSR.Mekh. i mashinostr. no.5:203-205 S-O
'63.   (MIRA 16:12)

Valeyev, K. G.

AID Nr. 983-14   5 June

CASES OF INTEGRABILITY OF MOTION EQUATIONS (USSR)

Valeyev, K. G. — Prikladnaya matematika i mekhanika, v. 27, no. 2, 1963,
211-217.   S/040/63/027/002/003/019

A study is made of the integrability of the motion equation

$$\frac{d^2r}{dt^2} = -\frac{kr}{r^3} + F, \quad k = \text{const}, \quad r = |r|,\qquad (1)$$

where r is the radius vector of a mass point moving around the fixed origin,
and F is a perturbation force acting upon the unity of mass. Equation (1) is
reduced to the equivalent system of motion equations in terms of G(momentum),
γ, g, and s (unit vectors of the orthogonal directed trihedral) and F_γ, F_g, and
F_s (projection of the perturbation force F into axes coinciding with the direc-
tion of γ, g, s) which is more convenient for integration. Solution of this
system is investigated for various particular forms of the perturbation force F.

Card 1/2

AID Nr. 983-14   5 June

CASES OF INTEGRABILITY OF MOTION [Cont'd]   8/040/63/027/002/003/019

The case of a plane motion ($F_g \equiv 0$; g is the unit vector perpendicular to a plane of motion) is analyzed first; it is shown, that the system can be integrated when $F_\gamma = kr^{-2} + ar^{-3}$; $F_s = br^{-4}$; and $F_g = 0$ (a and b are constants). This method for integrating motion equations is proposed for a more general case where a and b are not constants but certain functions of G. Integrability of motion equations when the force F acts in the direction of the velocity dr/dt of a moving mass point is analyzed for particular forms of the perturbation force.
[LK]

Card 2/2

L 15569-63   EWT(d)/FCC(w)/BDS   AFFTC   IJP(C)

AUTHOR: Valeyev, K. G. (Leningrad)

TITLE: Convergence of series defining the boundaries of instability regions for solutions of a second order linear differential equation with periodic coefficients

SOURCE: Prikladnaya matematika i mekhanika, v. 27, no. 3, 1963, 565-572

TOPIC TAGS: instability, instability region,   differential equation, small parameter, nonlinear differential equation

ABSTRACT: The author considers the differential equation

$$\frac{d^2y}{dt^2} + (\lambda - \mu a(t)) y = 0 \qquad (1.1)$$

where

$$a(t) = \sum_{s=-\infty}^{\infty} a_s e^{2ist}, \qquad a_{-s} = \bar{a}_s, \qquad \text{Im } a_0 = 0 \qquad (1.2)$$

He is interested in determining expansions μ, λ, где $\lambda_{n1}(\mu) \geqslant \lambda_{n2}(\mu)$

$$\lambda_{n1}(\mu) = n^2 + \mu b_1 + \mu^2 b_2 + \ldots + \mu^r b_r + e_1(\mu) \qquad (1.3)$$
$$\lambda_{n2}(\mu) = n^2 + \mu c_1 + \mu^2 c_2 + \ldots + \mu^r c_r + e_2(\mu) \qquad (n = 0, 1, 2, \ldots)$$

Card 1/3

L 15569-63
ACCESSION NR: AP3003252

defining the region of n-th instability and, in particular, obtaining estimates of the functions $\varepsilon_1(\mu)$, $\varepsilon_2(\mu)$ depending on the coefficients a_s of (1.2) and the known coefficients b_s, c_s of (1.3). Here $\lambda_{n1}(\mu) \geq \lambda_{n2}(\mu)$. The author uses the fact that on the boundary of the n-th region of instability (1.1) admits a solution of period 2 Π of the form

$$y = e^{n i t} \sum_{k=-\infty}^{\infty} e^{2 i k t} y_k \qquad (2.1)$$

Substituting (2.1) into (1.1), he obtains an infinite system which can be used to define the functions in (1.3).

Theorem 1: The expansion of the function $\lambda_0(\mu)$ in powers of μ, defining the boundary of the zero-th region of instability ($\lambda_0(\mu) \rightarrow 0$ as $\mu \rightarrow 0$) of the solution of (1.1), is majorized by the series

$$\lambda_0(\mu) \leqslant \mu \gamma_1 + 2h_1 (\gamma_1 \gamma_2)^{-\frac{1}{2}} \sum_{k=1}^{\infty} (\mu h_1)^k, \qquad h_1 = 0.25 \, (\sqrt{\gamma_1} + \sqrt{\gamma_2})^3$$

which converges for

$$|\mu| < \mu_1 \equiv h_1^{-1} \equiv 4 \, (\sqrt{\gamma_1} + \sqrt{\gamma_2})^{-3}$$

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L 15569-63
ACCESSION NR: AP3003252

There are similar theorems for the function λ_{ni} which are useful when a(t) is continuous, and one theorem to handle the case of discontinuous a(t). Orig. art. has: 93 formulas.

ASSOCIATION: none

SUBMITTED: 15Oct62   DATE ACQ: 23Jul63   ENCL: CO

SUB CODE: MM   NO REF SOV: 005   OTHER: 001

Card 3/3

VALEYEV, K.G. (Leningrad)

Adverse effect of combined resonances. Prikl. mat. i mekh. 27 no.6:
1134-1142 N-D '63.   (MIRA 17:1)

VALEYEV, K.G. (Leningrad):

"A qualitative analysis of differential equations of flight using a solar sail"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964.

L 9939-65   EWT(d)   Pg—4   IJP(c)   AFWL/ESD(dc)/ASD(f)-2/ASD(d) ASD/a --
ACCESSION NR: AT4047141 AFETR/SSD   RLK   S/0000/64/000/000/0110/0122

AUTHOR: Valeyev, K. G. (Leningrad); Rakit*skiy, Yu. V. (Leningrad)

TITLE: Use of difference methods in determining regions of instability of solu-
tions of systems of linear differential equations

SOURCE: Chislenny*ye metody* resheniya differentsial'ny*kh i integral'ny*kr
uravneniy i kvadraturny*ye formuly* (Numerical methods of solving differenti,
and integral equations and quadrature formu as), sbornik statey, Moscow   va.,
Nauka, 1964, 110-122

TOPIC TAGS: differential equation, ordinary differential equation, stability,
difference equation, continued fraction, matrix, determinant

ABSTRACT: The article deals with the stability of solutions of systems of linear
differential equations and their corresponding systems of difference equations.
Conditions are studied for the applicability of numerical difference met
determining regions of instability. A few of the main characteristics of system
of difference equations with periodic coefficients are noted, these being differen
tiated from difference equations with constant coefficients. Various techniques
involving matrix functions of a variable   right hand part   per

Card   1/2

L 9939-65

ACCESSION NR: AT4047141

fraction expansions, and operator techniques are all applied to rather specific examples of linear differential equations to test their solutions for stability. With development, the tests could probably be made more generally applicable. Orig. art. has: 93 formulas.

ASSOCIATION: none

SUBMITTED: 12Mar63   ENCL: 00   SUB CODE: MA

NO REF SOV: 7

Card 2/2

ACCESSION NR: AP4034278   S/0207/64/000/002/0120/0129

AUTHOR: Valeyev, K. G. (Leningrad)

TITLE: Qualitative investigation of differential equations for flight by solar sail

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1964, 120-129

TOPIC TAGS: optimum inclination angle, solar sail, planetary flight, plane motion, Keplerian motion, conic section trajectory, logarithmic spiral trajectory, solar sailing, solar radiation pressure

ABSTRACT: A study has been made to select the optimum solar sail setting θ in planetary flight. The equations of plane motion are written in polar coordinates r and φ for solar-sail thrust components as follows:

$$F_r = \delta r^{-2} \cos^2\theta - \mu k r^{-2}$$
$$F_\varphi = \delta r^{-2} \sin\theta \cos^2\theta - \mu k r^{-2}$$

where δ is the sail constant. Introducing x and y as dependent variables,

$$x = \frac{k}{r_0 \varphi^2}, \qquad y = \frac{r'}{r} \qquad (y = \operatorname{ctg} \alpha),$$

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ACCESSION NR: AP4034278

the equations of motion yield

$$d\xi / d\varphi = xy - 2bx^2, \qquad dy / d\varphi = 1 - x(1-a) - bxy + y^2 .$$

For a = b = 0, the unperturbed Keplerian motion is studied for a family of conic sections with eccentricity $\mathcal{E}$. For a logarithmic spiral trajectory, q = constant,

$$r = r^\varphi ,$$

the equations of motion become

$$xy - 2bx^2 = 0, \qquad 1 - x(1-a) - bxy + y^2 = 0 \qquad (x > 0) .$$

These are solved for the special cases 1) a = b = constant and 2) thrust force is tangent to the trajectory or $\Theta = \alpha$. It is shown that for a = b = constant, the resulting solution is unstable. For thrust vector P, independent in absolute magnitude of the force direction, expressions are derived for the optimum force direction on a circular orbit, $\mathcal{E}$ = 0, and a parabolic orbit, $\mathcal{E}$ = 1. The selection of an optimum sail setting Θ (with respect to solar rays) leads to the

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ACCESSION NR: AP4034278

expressions

$$\frac{\pi}{2} - \gamma + \theta = \Psi\left(\frac{\pi}{2} - \theta\right), \qquad \gamma = 2\theta + \sum_{k=1}^{\infty} \frac{\varepsilon \ln 2k\theta}{k \, 3^k} \, k$$

$$|\theta| < \frac{1}{2}\pi, \qquad |\gamma| < \pi$$

the values of which are calculated for $\varepsilon = 0, 0.5,$ and $1,$ where γ is the angle between thrust and solar-ray direction. Orig. art. has: 4 figures and 90 formulas.

ASSOCIATION: none

SUBMITTED: 12Nov63   ATD PRESS: 3069   ENCL: 00

SUB CODE: ME, SV   NO REF SOV: 006   OTHER: 003

Card 3/3

VALEYEV, K.G. (Leningrad)

Numerical solution of a linear differential equation with
exponential coefficients and linear retardation. Zhur. vych.
mat. i mat. fiz. 4 no.4(suppl.):129-13_ '64.

(MIRA 18:2)

ACCESSION NR: AP4029378   S/0199/64/005/002/0290/0309

AUTHOR: Valeyev, K. G.

TITLE: Linear differential equations with a delay linearly dependent on the
arguments

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 5, no. 2, 1964, 290-309

TOPIC TAGS: differential equation, linear differential equation, ordinary
differential equation, stability theory, Laplace transform, analytic function,
delay argument

ABSTRACT: The paper presents a sufficiently complete theory of linear differential
equations with constant coefficients and with delays in the arguments which are
linear functions of the arguments. The Laplace transform method is used to deter-
mine the analytic properties of the solutions of such equations. Both the solu-
tions and their transforms are given in the form of series. The simplest case,
when the delays are directly proportional to the arguments, is explicitly develop-
ed. A great deal of attention is paid specifically to the question of the stabili-
ty of the solutions. The theory presented in the paper is useful, for example,
when studying the problem of controlling a distant receding object where it is not
possible to ignore the delays in the transmission of the control signals. In a
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ACCESSION NR: AP4029378

sense this paper is a continuation of earlier work by the same author. "The
author thanks V. I. Zubov for his assistance." Orig. art. has: 125 formulas.

ASSOCIATION: none

SUBMITTED: 04Jan63

SUB CODE: MA

ATD PRESS: 3056

NO REF SOV: 004

ENCL: 00

OTHER: 003

Card 2/2

AUTHORS: Valeyev, K. G. (Leningrad);

Motion of the center of inertia of a satellite in the field of attraction of the earth

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. .. 1965, 236-248

TOPIC TAGS: satellite, satellite orbit, differential equation

ABSTRACT: Using results of K. G. Valeyev (O nekotorykh sluchayakh integriruyemosti uravneniy dvizheniya material'noy tochki pod deystviyem n'yutonovoy sily :

ASSOCIATION: none

Card 1/2

L 44354-65

ACCESSION NR: AP5010629

SUBMITTED: 03Oot64   ENCL: OC   SUB CODE: SV, MA

NO REF SOV: 009   OTHER: 004

Card 2/2

L 59218-65   EWT(d)   IJP(c)

ACCESSION NR: AP5014941   UR/...

AUTHORS: Valeyev, ... Leningrad ; Shcheglov, G. N. ,Leningrad

TITLE: Certain cases of integra... of ... motion a... ... equatio ... a plan... point in a ... alleged ...

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 3, 1965, 584-587

TOPIC TAGS: integra... ... ... field

ABSTRACT: Certain cases of the problem of forces with which the equations of motion are integrable are studied. The system of equations

$$d^2 r / dt^2 = - kr / r^3 + F \qquad (k = \text{const}, \ r = |r|),$$

is given with initial conditions

$$r = r_0, \quad dr / dt = r_0', \quad t = t_0,$$

where r is the radius vector of a material point M with unit mass; F - a force, supplementary to Newtonian. The center of gravity is located at a point C. The case of planar movement is studied in which F lies in the plane of motion. A

Card 1/3

L 19218-65

ACCESSION NR: AP5014941

polar coordinate system is used in which φ is measured from some fixed direction. In this coordinate system the equation system appears as

$$\ddot{r} - r\dot{\varphi}^2 = -kr^3 + F_r, \quad r\ddot{\varphi} + 2\dot{r}\dot{\varphi} = F_\varphi \quad (\dot{r} = dr/dt)$$

with initial conditions

$$r = r_0, \quad \dot{r} = \dot{r}_0, \quad \varphi = \varphi_0, \quad \dot{\varphi} = \dot{\varphi}_0, \quad t = t_0$$

where F_r and F_φ are projections of the force F on the respective directions r and φ. The projections of the supplementary forces on the Newtonian force are written as

$$\alpha = F_r r k^{-1}, \quad \beta = F_\varphi r k^{-1}$$

A transformation to Cartesian coordinates is made to facilitate solution by approximate asymptotic methods. An arbitrary differentiable function $f(\ldots)$ is introduced such that

$$F_r = \frac{-k}{r^2}\,\omega\left(\frac{k}{r\dot{\varphi}^3}\right), \qquad F_\varphi = m\,\frac{kr}{r\dot{\varphi}^2}, \qquad m = \text{const.}$$

A particular solution is found and is applied in finding trajectories of motion of the point M for several additional cases of force distribution and surfaces.

ASSOCIATION: none

Card 2/3

L 59218-65

ACCESSION NR: AP 4942

SUBMITTED: 20May64   ENCL: 00   SUB CODE: MA

NO REF SOV: 002   OTHER:

Card 3/3

L 00275-66   EWT(d)/EWT(1)/EWP(m)/FS(v)-3/EWA(d)   IJP(c)   GW
ACCESSION NR: AP5021309

UR/0040/65/029/004/0751/0751

AUTHOR: Valeyev, K. G. (Leningrad)

TITLE: A case of integrability of perturbed motion equations of a satellite

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 4, 1965, 751

TOPIC TAGS: differential equation, satellite orbit

ABSTRACT: The author considers

$$r'' - r\varphi'^2 + kr^{-2} = F_r, \qquad r\varphi'' + 2r'\varphi' = F_\varphi \qquad (k = \text{const}). \qquad (1)$$

F_r and F_φ are projections of the perturbing force F in the r and φ directions, and it is assumed that the perturbing force is perpendicular to the velocity and lies in the plane of the trajectory. If the magnitude of F depends only on v and the distance r from the satellite to the attracting center, (1) reduces to

$$F_r = -F(r, v)\frac{r\varphi'}{\sqrt{r^2\varphi'^2 + r'^2}}, \qquad F_\varphi = F(r, v)\frac{r'}{\sqrt{r^2\varphi'^2 + r'^2}}. \qquad (2)$$

The author seeks a solution of (2) subject to

$$r = r_0, \quad r' = r_0', \quad \varphi = \varphi_0, \quad \varphi' = \varphi_0', \quad t = t_0 \qquad (3)$$

which he finds in quadratures under the given assumptions. (1), (2) also apply to

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L 00275-66
ACCESSION NR: AP5021309

3

electron motion in electromagnetic fields. "A. I. Lur'ye noted to the author that certain cases of electron motion in electromagnetic fields (S. A. Boguslavskiy. Puti elektronov v elektromagnitnykh polyakh. Mosgublit, 1929) lead to equations of the form (1), (2)." Orig. art. has: 12 formulas.

ASSOCIATION: none

SUBMITTED: 03Oct64   ENCL: 00   SUB CODE: ME
                                                                                    SV
NO REF SOV: 001   OTHER: 000

Card 2/2

L 9231-66   EWT(1)/EWP(m)/FS(v)-3/EWA(d)   GW

ACC NR: AP6000549

SOURCE CODE: UR/0040/65/029/006/1100/1104

AUTHOR: Valeyev, K. G. (Leningrad)

ORG: none

TITLE: Equations of motion for an earth satellite with a consideration of atmospheric resistance

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 6, 1965, 1100-1104

TOPIC TAGS: artificial satellite, aerodynamic drag, satellite orbit

ABSTRACT: The equations of motion describing the orbit of an artificial earth satellite, including the effects of aerodynamic drag, are analyzed. The satellite is described as a point particle M(x,y,z), and its trajectory is given in spherical coordinates r, ϑ, λ. The atmospheric resistance is given by the vector

$$w = -\rho(u, \gamma, s)(v - \Omega \times r), \qquad \Omega = k\Omega \qquad \left(v = \frac{dr}{dt}\right)$$

where ρ is an empirically determined proportionality constant, and $u = 1/r$. The equation of motion for M is given by $d^2r/dt^2 = -\operatorname{grad} \Pi - \rho(dr/dt - \Omega \times r)$

Card 1/2

L 9231-66

ACC NR: AP6000549

where Π is the potential energy of M

$$\Pi(u, \gamma) = -\mu u - su^3(1 - 3\gamma^2) - \dots \qquad (u = r^{-1}, \; \gamma = \cos\theta).$$

To make the equations amenable to numerical analysis, the following independent variable is introduced

$$d\tau = r^{-2}|\mathbf{r} \times d\mathbf{r}| = r^{-2}|\mathbf{r} \times d\mathbf{r}/dt|\,dt = r^{-2}h\,dt = (h)^{1/2}d\varphi,$$

and the resulting set of equations for the satellite motion is written in the form

$$u'' + u = -\frac{1}{h}\frac{\partial\Pi}{\partial u} + \frac{1}{hu^3}\frac{\partial\Pi}{\partial\gamma}\gamma'u' + \frac{\rho\Omega}{hu^4}(1 - \gamma^2 - \gamma'^2)^{1/2}u'$$

$$\gamma'' + \gamma = -(1 - \gamma^2 - \gamma'^2)\frac{1}{hu^3}\frac{\partial\Pi}{\partial\gamma} - \frac{\rho\Omega}{hu^4}(1 - \gamma^2 - \gamma'^2)^{1/2}\gamma'$$

$$h' = -\frac{2}{u^3}\frac{\partial\Pi}{\partial\gamma}\gamma' - \frac{2\gamma\sqrt{h}}{u^3} + \frac{2\rho\Omega}{u^4}(1 - \gamma^2 - \gamma'^2)^{1/2},$$

As an example, the stability of a circular equatorial orbit is considered, and the following stability criterion is arrived at

$$\left|\frac{\partial f_0}{\partial u_0}u_0/f_0^{-1}\right| < 0.5 + O(s_0 f_0^{-1} + f_0) \cdot$$

Orig. art. has: 41 equations.

SUB CODE: 22/   SUBM DATE: 19Oct64/   ORIG REF: 002/   OTH REF: 001

Card 2/2

VALEYEV, K.G. (Leningrad)

Equations describing the motion of an earth's satellite
allowing for the resistance of the atmosphere. Prikl. mat.
i mekh. 29 no.6:1100-1104 N-D '65.   (MIRA 19:2)

VALEYEV, K.G.

Theory of the Laplace transformation. Izv. vys. ucheb. zav.,
radiofiz. 8 no.2:424-426 '65.   (MIRA 18:6)

1. Leningradskiy politekhnicheskiy institut.

VALEYEV, K. (Leningrad)

... of integrability of the equations describing the perturbed
motion of a satellite. Prikl. mat. i mekh. 29 no.4:751 Jl-Ag '65.
(MIRA 18:9)

VALEYEV, K.G.

    Theory of heat exchangers. Trudy LPI 252:7-15 '65.
                             (MIRA 18:9)

VALEYEV, Kh.D.

First Tatar Republic conference in interchangeability and techni-
cal control. Izm. tekh. no.2:93 Mr-Ap '57.   (MIRA 10:6)
            (Tatar A.S.R.--Measuring instruments)

VALEYEV, Kh. S.

USSR/Electricity
Condensers, Electric
Furnaces, Metallurgical

PA 38/49T23   Mar 49

"High-Voltage, High-Frequency Steatitic Condensers,"
Kh. S. Valeyev, Cand Tech Sci, State Res Electro-
ceramics Inst, 4½ pp

"Elektrichestvo" No 3

At present all tempering-melting furnaces are furnished
with barrel-type condensers, manufactured by factories
of various ministries. Although these condensers
satisfy demands of factories, development of rational-
type condenser still cannot be called completed.
Therefore, GIEKI started to develop high-voltage, high-
38/49T23

USSR/Electricity (Contd)   Mar 49

frequency pot-type condenser with steatitic materials
of higher reactive magnitude and capacity, according
to developments in the Institute. Describes character-
istics of materials, with screen diagrams and a table
of experimental results.

38/49T23

VALEYEV, KH. S.

AID P - 2009

Subject   : USSR/Electricity

Card 1/2   Pub. 27 - 13/31

Author   : Valeyev, Kh. S., Kand. of Tech. Sci., Moscow

Title   : Electric properties of steatitic materials at elevated
                temperatures

Periodical   : Elektrichestvo, 4, 56-62, Ap 1955

Abstract   : The author presents results of his tests with various
                types of steatite in temperatures up to 400°C.   He
                finds that the breakdown strength of the electric field
                (Enp) depends to a large degree upon the structure and
                method of production of test samples, and also upon the
                speed in raising the voltage in the test. The Enp was
                found to be larger at d-c than at a-c of usual in-
                dustrial frequency. At d-c it increases with the
                temperature and reaches a maximum which is specific
                for each type of steatite, and then declines. At

Elektrichestvo, 4, 56-62, Ap 1955   AID P - 2009

Card 2/2   Pub. 27 - 13/31

a-c up to 250°C, E_{np} in practice does not change.
Eight diagrams, 4 tables, 13 references (1937-1954).
(11 Russian).

Institution: None

Submitted : No date

ALEKSANDROV, N.V.; BOGORODITSKIY, N.P.; VALEYEV, Kh.S.; VUL, B.M.; DROZDOV, N.G.; KURBATOVA, N.S.; MIKHAYLOV, G.P.; MIKHAYLOV, M.M.; PETROV, G.N.; PRIVE-ZENTSEV, V.A.; RENNE, V.T.; SKANAVI, G.I.

Professor B.M.Tareev. Elektrichestve ne.8:94 Ag '56. (MIRA 9:10)
(Tareev, Boris Mikhailevich)

VALEYEV, Kh.S., kand.tekhn.nauk; MASHKOVICH, M.D., kand.tekhn.nauk

Semiconductor oxide ceramics. Trudy GIEKI no.2:20-39 '57.

(MIRA 11:7)

(Ceramics) (Semiconductors)

VALEYEV, Kh.S., kand.tekhn.nauk; GAY, I.A., inzh.

Investigating certain titanate and zirconate formation processes.
Trudy GIKKI no.2:39-53 '57.   (MIRA 11:7)
        (Ceramics) (Titanates) (Zirconates)

VALEYEV, Kh.S., kand.tekhn.nauk; KRASNOGOLOVYY, N.K., inzh.; LITVINOVA, M.I.

Investigating the reversing dielectric permittivity of certain ferroelectric ceramic materials in the domain of weak variable fields. Trudy GIEKI no.2:100-109 '57.   (MIRA 11:7)
  (Dielectric constants) (Ceramic materials) (Ferroelectric substances)

CALEYEV AK.S.

AUTHORS	Valeyev Kh.S., Mashkovich M.D.	57-8-2/36
TITLE	Nonlinear ZnO-TiO$_2$-Semiconductors.	
	(^{H}elineynyye poluprovodniki na osnove ZnO-TiO$_2$ - Russian)	
PERIODICAL	Zhurnal Tekhn.Fiz., 1957, Vol 27, Nr 8, pp 1649-1651 (U.S.S.R.)	

ABSTRACT   Some electric properties of polycrystalline oxide-semiconductors in
a consecutive composition series, starting with little additions
of TiO$_2$ to ZnO and ending with additions of up to from 3o-4o% mole
TiO$_2$-which are already dielectrics-were investigated. With little
quantities of TiO$_2$(1$\rightarrow$3 % Mole) the resistance decreased compared with
pure ZnO.However,beginning with 1o% TiO$_2$ the resistance increases
strongly. The authors stated that with a content of up to 3o% TiO$_2$
electronic conduction,and with higher TiO$_2$ concentrations hole con-
duction develops. Based on the investigations can be said that the
semiconductor mixtures on ZnO-TiO$_2$ basis are a mixture of crystal-
line phases with different kinds of conduction.We can assume that the
reason for the remarkable nonlinearity of the polycrystalline mater-
ials investigated is to be found in the contact phenomeny at the li-
mit of the zinc-oxide grains and of the zinc-crthititanate grains
which depend on the electron-hole transitions.
(1 illustration. 1 table and 7 Slavic references).

ASSOCIATION	GIEKI,Moscow.
SUBMITTED	March 21, 1957
AVAILABLE	Library of Congress.
Card 1/1	

VALEYEV, KH. S.

AUTHORS: Valeyev, Kh. S., Drozdov, N. G.,Frumkin, A. L.   57-11-14/33

TITLE: Some Studies on Li-Zn-Ferrites (Nekotoryye issledovaniya v oblasti Li-Zn ferritov)

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 11, pp. 2517-2527 (USSR)

ABSTRACT: The sintering process as well as some properties of Li-ferrites which are of importance as high-frequency materials as well as objects for physical investigations, are investigated. The investigation of the sintering process was mainly carried out according to the thermogram method. By means of the thermograms conclusions were drawn as to the temperature at which ferrites form, the interaction of ferrites and the atmosphere during annealing etc. A comparative classification of LI- and Ni-ferrites is given. The authors show that Li-ferrites are better capable of reaction than are Ni-ferrites. The reaction for the formation of the solid solution begins immediately after the thermal decomposition of lithiumcarbonate at 700°C and ends in a narrow temperature interval. The reaction temperature depends on the ratio of the components to one another. The interaction between ferrites and atmosphere during annealing was stated. It leads to the reversal loss of oxygen. The authors show that sintering above the temperature of synthesis is connected with the growing of the crystals as well

Card 1/2

Some Studies on Li-Zn-Ferrites.   57-11-14/33

as with the formation of their regular hexagon structure. The re, ₁
sults of magnetic measurements show that Li-Zn-Ferrites show a
dispersion of the resonance type within the range of 1o7 cycles.
The authors stated that the magnetic permeability of the ferri-
tes investigated is smaller than 1 at a wave length of 3,2 cm.
Li-Zn-ferrites supply the usual absorption curve in dependence on
the constant magnetic field in the case of high frequency. The
thermal extension of the Li-Zn-ferrite within a wide temperature
range was investigated and an anomaly was found in the near of
the Curie point with the extension in consequence of heat. There
are 9 figures, 3 tables and 12 Slavic references.

ASSOCIATION: Moscow Institute for Energetics (Moskovskiy energeticheskiy in-
stitut)

SUBMITTED: December 3o, 1956

AVAILABLE: Library of Congress

Card 2/2

67197

24.7700

SOV/58-59-7-15748

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 156 (USSR)

AUTHOR: Valeyev, Kh.S., Mashkovich, V.D.

TITLE: Nonlinear Ceramic ZnO - TiO$_2$-Base Semiconductors

PERIODICAL: V sb.: Primeneniye poluprovodnikov v elektrotekhn. Leningrad, 1958,
            pp 115 - 123

ABSTRACT: A new type of nonlinear resistor has been developed from ZnO with admixtures
            of TiO$_2$. It was established that the nonlinearity of the resulting ceramic
            semiconductors is due to electron-hole transitions on the grain-boundaries
            of ZnO and the spinel of 2ZnO - TiO$_2$. Cheap raw materials were used for the
            preparation of these semiconductors. The presence of semiconductor proper-
            ties in conjunction with nonlinearity at various concentrations of TiO$_2$
            (10 to 25%) makes it possible to produce semiconductors with a ρ ranging
            from about 10^2 to 10^6 ohms $\cdot$ cm (at 6 V). It is possible to prepare high-
            resistance, as well as low-resistance, nonlinear elements, capable of
            functioning at increased temperatures and of dissipating high power. (Gos.
            issledovatel'skiy elektrokeramich. in-t, USSR).

Card 1/1   The authors' résumé

VALEYEV   Kh. S.

34.7100

66561

SOV/81-59-15-54163

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, p 310 (USSR)

AUTHORS: Valeyev, Kh.S., Iashkovich, I.D.

TITLE: Non-Linear Ceramic Semiconductors on the ZnO-TiO$_2$ Base

PERIODICAL: V sb.: Primeneniye poluprovodnikov v elektrotekhn. Leningrad, 1958,
             pp 116 - 125

ABSTRACT: A new type of non-linear resistors on oxide base (ZnO and TiO$_2$) has
             been proposed. It has been established that the cause of the non-
             linearity of the obtained ceramic semiconductors are electron-hole
             transitions on the grain boundaries of zinc and spinel 2ZnO-TiO$_2$. It
             is noted that the semiconductors of various configuration can be pre-
             pared by the usual methods of ceramic technology on the base of cheap
             raw materials. In this case the necessary semiconductor properties are
             ensured as a result of the burning in a weakly oxidizing medium (Silit
             furnace). It is indicated that the presence of semiconducting properties
CARD 1/2   in combination with the non-linearity at various TiO$_2$ concentrations

66561

Non-Linear Ceramic Semiconductors on the ZnO-TiO$_2$ Base   SOV/...1-59-15-5 103

(λ - 25.) makes it possible to obtain semiconductors with ρ varying approximately from 10^2 to 10^8 ohm cm. It is noted that this permits to produce high-ohm as well as low-ohm non-linear elements which can operate at increased temperatures and can correspondingly dissipate high powers.

C. Maslennikova

C un. 2/2

82901

24.3100

S/120/60/000/02/052/052
E032/E314

AUTHORS: Valeyev, Kh.S., Vorontsov, Yu.N. and Morozov, M.G.

TITLE: Spark Generator with a Flash Duration of Less Than
1 μs

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No 2,
pp 122 - 123 (USSR)

ABSTRACT: A device is described which can be used to produce
light flashes having a duration of less than 1 μs.
The device is used to obtain photographic records of
the flow pattern in an ultrasonic aerodynamic tube.
The principle of the instrument was described by
Fitzpatrick and Hubbard (Ref 1) and Beams et al
(Ref 2). A general scheme is illustrated in
Figure 1. The device consists of a capacitor with
a spark gap 2 , a high resistance R (equal to
200 MΩ), a DC voltage source and a blocking device
1 which earths the capacitor when the supply is
switched off. A cylindrical capacitor with a calcium
titanate dielectric having an electrical strength of
18 - 22 kV/mm, a resistivity of 10^{14} - 10^{15} Ω cm and a

Card1/3

82901

S/120/60/000/02/032/052
E032/E314

Spark Generator with a Flash Duration of Less Than 1 μs

dielectric constant of 140 - 150 was employed. Other
materials which can be employed are solid solutions of
barium titanate, strontium titanate and "SVT material".
Figure 2 shows the illuminating device. It consists
of a capacitor and a spark gap formed by the leads 1
and 2 , having 1.5 mm dia tungsten electrodes at the
ends. The dielectric 5 of the capacitor was made of
calcium titanate and the electrode 4 of silver.
In order to reduce the impedance, the length of the
leads to the spark gap was kept as small as possible.
Tungsten was chosen in order to reduce afterglow. The
device is held in position by the metal holder 3 ,
fixed to an earthed base and is charged through the
line 7 . The charge is excited by a high-voltage
generator (AKI-50) through a resistor of 200 MΩ (glass
tube 2.5 x 2.5 mm^2, ~1 m in length, filled with
alcohol and using fused molybdenum electrodes). At a

Card 2/3   voltage of 16 - 20 kV and a spark gap of 5-10 mm the

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S/120/60/000/02/052/052
E032/E314

Spark Generator with a Flash Duration of Less Than 1 µs

discharge frequency lay between 0.3 and 0.5 cps (in
atmosphere at NTP). The illuminator was used to obtain
photographic records of processes in an ultrasonic
aerodynamic tube. The processes could also be estimated
visually in view of the low frequency involved.
There are 3 figures and 2 English references.

ASSOCIATION: Gosudarstvennyy issledovatel'skiy elektrokeramicheskiy
institut (State Research Institute for Electroceramics)

SUBMITTED: January 25, 1959

Card 3/3

S/081/63/000/004/024/051
B187/B208

AUTHORS: Drozdov, N. G., Valeyev, Kh. S., Mashkovich, M. D.

TITLE: Nonlinear semiconductors on the basis of zinc and titanium oxides with glass admixture

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 431, abstract 4M41 (Tr. Gos. issled. elektrokeram. in-ta, no. 4, 1960, 64 - 69).

TEXT: The authors studied a possible improvement in the nonlinear properties of semiconductors on the basis of $ZnO-TiO_2$ by adding easily fusible glass. Small additions of glass were assumed to cause an additional artificial blocking layer by forming a thin glass film on the grain surface. Low-resistant compositions of $ZnO-TiO_2$ were first synthesized at a temperature of $1300^{\circ}C$ and then comminuted to maximum grain diameters of 10 - 15 μ, after which 2 - 6 % by weight of easily fusible glass were added. Burning was effected at temperatures of 1030 - 1320°C, the final temperature being maintained for about 1 hr. With rising temperature of

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Nonlinear semiconductors on the ...

S/081/63/000/004/024/051
B187/B208

burning resistivity dropped abruptly owing to a reduction of the contact resistances caused both by diminution of the spacings between the grains and by a reduction in the number of contact places in the process of re-crystallization. Under otherwise equal conditions resistivity consider-ably increases with an increasing proportion of easily fusible glass and with increasing TiO_2-content. The nonlinearity coefficient was found to be increased considerably by adding small amounts of easily fusible glass to a semiconductor composition of the Tn_2TiO_4- ZnO type, both at high and low voltages. [Abstracter's note: Complete translation.]

Card 2/2

ACCESSION NR: AR3000544

S/0081/63/000/007/0409/0409

SOURCE: RZh. Khimiya, Abs. 7M22

AUTHOR: Valeyev, Kh. S.; Mashkovich, M. D.

TITLE: Effects of thermal treatment on conductance of semiconductors of ZnO-TiO sub 2 system

CITED SOURCE: Tr. Gos. issled. elektrokeram. in-ta, vyp. 4, 1960, 70-80

TOPIC TAGS: conductance; semiconductors ZnO-TiO sub 2; heat treatment

TRANSLATION: Presentation of the results of a study of the effects of thermal treatment procedures (firing and iterative reheating) on electro-physical characteristics of materials of ZnO-titanium dioxide system, consisting of a mixture of two crystalline phases: spinel or

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ACCESSION NR: AR3000544

composition $Zn_2 TiO_4$ and, depending on the ratio of ZnO and TiO_2, either free ZnO or TiO_2. It was ascertained that final temperature of firing, reheating and rate of cooling exert an influence on specific resistance value and on the value of its temperature coefficient. G. Gerashchenko

DATE ACQ: 21May63

ENCL: 00   SUB CODE: 00

Card   2/2

VALEYEV, Kh.S., kand.tekhn.nauk; MEDVEDOVSKAYA, E.I., inzh.; NOTKINA, S.D.,
inzh.

Synthesis of zinc stannates. Trudy GIEKI no.4:80-86 '60.
(MIRA 15:1)

(Zinc stannate)

21161

S/032/61/027/004/025/02δ
B103/B201

15.2300   1273, 1136, 1160

AUTHORS: Valeyev, Kh. S., Kostyukov, N. S., and Smirnova, T. M.

TITLE: Measuring apparatus for viscosity with continuous
                recording of the torsion angle and of temperature

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 4, 1961, 472-474

TEXT: The authors worked out the device of viscosity measurement between
10^8 and 10^{14} poises for ceramic substances (refractories, electrical and
radiotechnical ceramics) in the plastic state between 20 and $1350^{\circ}C$.
The torsion rate of a cylindrical specimen is measured under constant
load. Since the viscosity of ceramic substances as well as of structured
liquids depends not only on temperature, but on time as well, this
property must be determined both under dynamic and static conditions.
The authors' instrument serves for determining these two dependences.
Furthermore, it can be used to record the deformations of the specimen
while cooling (in the reverse motion). In measurements under dynamic
conditions, temperature and deformation are recorded by means of two

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21161

Measuring apparatus for viscosity ...

S/032/61/027/004/025/028
B103/B201

light beams on photopaper inserted in a drum by Kurnakov (Abstracter's note: not described in the text). The deformation of the specimen is only recorded under static conditions. The torsional force is in this case applied to the specimen at the instant when the temperature of recording is attained. Cylindrical specimens with a neck 10 mm in diameter and 8 mm in height, serving as the working piece, are used. The torsional moment is transmitted via the upper and the lower groove to the thickened parts of the specimen. A scheme of the apparatus is presented in Fig. 1. A Silit oven 2 rests upon the lifting table 1. The torsion system 3 and the table are fastened to brackets in the floor and in the wall, respectively. An asbestos-cement plate 4 protects system 3 against the heat. The wall chest houses the temperature-recording mirror galvanometer 6 (Type M-21 (M-21)), two light sources 7, mirror 8, Kurnakov drum 9, shunt 10 as a connection of thermocouple 11 to 6, autotransformer 12, and Warren motor 13 with reductor 14 for raising the voltage in the heater elements of the oven. Fig. 2 presents the construction of the torsion system. The fixed cylinder 1 made of refractory ceramics is fastened to the lower steel plate 2 by means of four screws 3. The upper plate 4 is linked to the lower one by means

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Measuring apparatus for viscosity ...

S/032/61/027/004/025/028
B103/B201

of four pins 5. Two arms 6 welded on plate 4 support the whole system
hanging from bracket carrier 7 in the wall. A mobile cylindrical bar 8
made of refractory ceramics is by means of pin 9 connected to balance arm
10 via shaft 12 which rotates freely in bearing 11. Drive pulley 13 is
fixed to the upper end of the shaft 13 and weights 14 are connected by
means of threads guided over rolls 15. Three adjusting screws 17
regulate height and inclination of mirror 16. To mount the sample in the
oven, the latter is lowered by a worm drive, until the clamping device
is freely accessible. Drive pulley 13 is turned by about 1/3 of the full
turn, and the specimen is inserted between the mobile and the fixed
clamping device. The oven is then lifted such that the specimen is
brought into its center, whereupon the heater elements are heated with
adjustable voltage. The drum rotates at speeds of 8, 2, 0.5, and 0.21 rpm.
The temperature is measured prior to recording, and the temperature curve
is calibrated. Pyrometer of the type МПП-154 (MPP-154) is used for
this purpose. Recording has been performed by the authors at 0.5 rpm.
Fig. 3 presents the course of the deformation curve of an electrotechnical
porcelain specimen under dynamic conditions. Torsion began at 990°C.
The curve shows a distinct break between 1060 and 1110°C. In the

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Measuring apparatus for viscosity ...

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mathematical interpretation, the straight part of the deformation curve
is extended to the left (x-axis), and divided into equal, 5-mm long
sections by means of vertical lines. The distances from the x-axis
to the points of intersection of the vertical sections K_n and K_{n-1}

with the deformation curve indicate the curvature at given instants.
The deformation angle $\Delta\varphi$ within the time $\Delta\tau = 125$ sec is determined
therefrom, and next, the viscosity is determined in poises by means of
calculation formulas. Calculation results permit constructing $\log \eta$ as
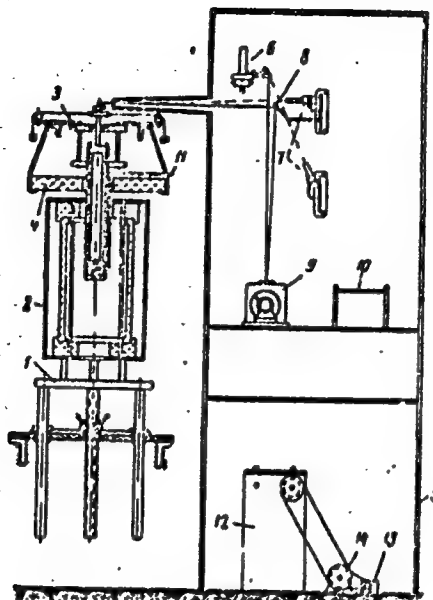a function of temperature or time. There are 4 figures and 2 Soviet-bloc
references.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy elektrokeramiches-
               kiy institut (State Scientific Research Institute of
               Electroceramics)

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Measuring apparatus for viscosity ...

Fig. 1: Scheme of apparatus

S/032/61/027/004/025/028
B103/B201
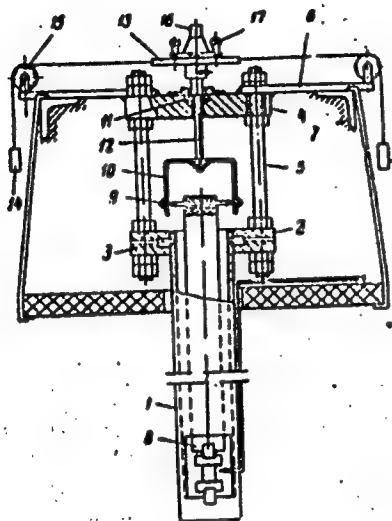
Card 5/7

Measuring apparatus for viscosity ...

Fig. 2: Design of torsion system

Measuring apparatus for viscosity ...

Fig. 3: Deformation
diagram of M-23
(M-23) electro-
technical porcelain
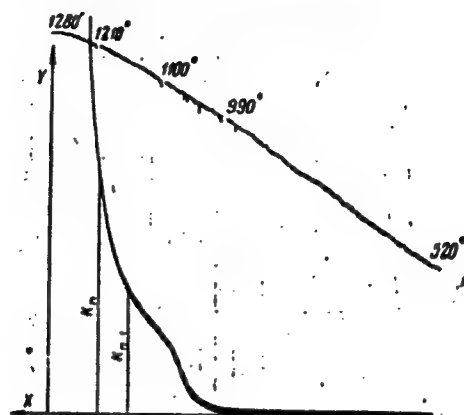
Card 7/7

VALEYEV, Kh.S., kand.tekhn.nauk (Moskva); GAREVSKIY, V.N., inzh. (Moskva);
KOSTYUKOV, N.S., kand.tekhn.nauk (Moskva)

Change in the electrical strength of high-voltage porcelain
subject to the action of high-voltage d.c. with long duration.
Elektrichestvo no.1:59-61 Ja '63.   (MIRA 16:2)
                (Electric insulators and insulation)
                (Porcelain—Electric properties)

VALEYEV, Kh.S. (Moskva); YESIKOV, Yu.G. (Moskva)

Discharge voltage of insulators with high ambient relative humidity.
Elektrichestvo no.4:86-88 Ap '63.   (MIRA 16:5)
          (Electric lines—Overhead) (Electric discharges)

BOGORODITSKIY, N.P.; VAVILOV, V.S.; VALEYEV, Kh.S.; DROZDOV, N.G.;
KORITSKIY, Yu.V.; PRIVEZENTSEV, V.A.; RENNE, V.T.; TAREYEV, B.M.;
YAMANOV, S.A.

B.M. Vul; on his 60th birthday and 35th anniversary of his
scientific work. Elektrichestvo no.8:95 Ag '63. (MIRA 16:10)

ALAD'YEV, A.T., tekn. (Moskva); VASIL'YEV, Kh.S., kand.tekhn.nauk (Moskva)

Consideration of the aging of the dielectric in designing ceramic condensers with large reactive power. Elektrichestvo no.3:37-41 Mr '64.   (MIRA 17:4)

ACCESSION NR: AP4029147   S/0105/64/000/004/0072/0076

AUTHOR: Valeyev, Kh. S. (Candidate of technical sciences); Knyazev, V. A.; Drozdov, N. G. (Doctor of technical sciences, Professor)

TITLE: Nonlinear semiconductor resistors based on zinc, silicon, and tin oxides

SOURCE: Elektrichestvo, no. 4, 1964, 72-76

TOPIC TAGS: zinc oxide orthostannate semiconductor, zinc oxide orthosilicate semiconductor, nonlinear semiconductor

ABSTRACT: Zinc oxide was selected as a semiconductor in the investigation reported, and TiO_2, SiO_2, SnO_2, Al_2O_3, B_2O_3 were tried as dielectric-forming substances. Specifically, two-component $ZnO - SiO_2$ and $ZnO - SnO_2$ ceramics were investigated. Thermographic and petrographic studies of ZnO, SiO_2, SnO_2 and their mixtures in various molecular ratios were conducted. It was found that at $1150-1270$ C, the $ZnO - SiO_2$ compound had a slight exothermic effect and exhibited a pronounced expansion of the specimens. Zinc orthosilicate proved to be a good dielectric with $\varepsilon = 8$, $\rho = 10^{12}$ ohms/cm and a breakdown voltage of

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ACCESSION NR: AP4029147

30 kv/mm. Zinc orthostannate could be sintered at 1480 C and had ε = 10 and a breakdown voltage of 25 kv/mm. In the specimens certain proportions were held between the amount of zinc-oxide crystals and that of the ortho-compound. Additional barrier layers were created in some experiments by introducing a low-melt glass. The static current-voltage characteristics, nonlinearity factor, resistance to 20/40- μsec   current pulses, pulse-carrying capacity , density, specific heat capacity, and thermal conductivity were measured. It was found that the degree of nonlinearity of the material can be controlled by introducing low-melt glass. Orig. art. has: 5 figures, 7 tables, and 4 formulas.

ASSOCIATION: Gosudarstvenny*y issledovatel'skiy elektrokeramicheskiy institut (State Electroceramic Research Institute); Moskovskiy energeticheskiy institut (Moscow Power-Engineering Institute)

SUBMITTED: 20Dec63   ATD PRESS: 3050   ENCL: 00

SUB CODE: EC.   /   NO REF SOV: 014   OTHER: 003

Card: 2/2

ALAD'YEV, A.T., kand. tekhn. nauk; VALEYEV, Kh.S., kand. tekhn. nauk

Effect of the cooling of ceramic condensers with large reactive power rating on the heat stresses in the dielectric. Elektrichestvo no.6: 65-67 Je '65.   (MIRA 18:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy elektrokeramicheskiy in-stitut.

VALEYEV, M.

27-1-11/19

AUTHOR: Valeyev, M., Teacher at the Trade School # 12 (Tatarskaya ASSR)

TITLE: Our Pedagogical Study (Nash pedagogicheskiy kabinet)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 1, p 22 (USSR)

ABSTRACT: The article deals with the problem how to achieve a higher pedagogical and cultural standard of the teaching staff in professional schools (Uchebnyye zavedeniya trudovykh rezervov).
    Many professional schools have established special pedagogical studies supplied with various matters of instruction on professional and theoretical teaching and educational work. One finds here examplary time-tables, lesson abstracts, methodical treatments, pamphlets composed by experienced teachers, information about new technical achievements, new text-books and different teaching appliances.
    The part dedicated to professional teaching contains a list of school work, lesson plans, materials showing labor methods of production innovators, different programs and instructions on normalization of productional school work

Card 1/2

Our Pedagogical Study

and the technics of safety precautions. Special albums contain
reproductions of devices manufactured by school masters and
applied for teaching purposes.
     The educational division contains political propaganda,
sports news, works of masters and teachers on educational
questions and proposed subjects for scientific, political and
technical discussions.
     At present the pedagogical study gets from the All-Union
Society for Distribution of Scientific and Political Information
(Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i
nauchnykh znaniy) 27 different newspapers, journals and book-
lets, bulletins and methodical works, some publications of the
Labor Reserves Chief Administration and other literature.
     One corner of the study is reserved for the preparation of
lectures. Here one finds a recommended list of literature on
every subject, text-books, newspaper and journal cuttings and
other materials.

AVAILABLE: Library of Congress

Card 2/2

IVANOV, V P.; VALEYEV, M.Kh.

Organizing operations for the rapid construction and installation
of drilling rigs in the Tatar Oil Well Drilling Trust. Neft.
khoz. 42 no. 5:17-24 My '64.   (MIRA 17:5)

BAZHENOVA, A.P., doktor med. nauk ; VALEYEV, M.V.

Problems in the etiology, clinical aspects and treatment of cancer of the penis. Khirurgiia no.3:103-108 '63. (MIRA 16:5)

1. Iz Gosudarstvennogo onkologicheskogo instituta imeni P.A. Gertsena (direktor - prof. A.N.Novikov).
(PENIS—CANCER)

VALEYEV, N.G.

Pay greater attention to screw pumps. Neftianik 7 no.7:16 Jl '62.

1. Starshiy inzh. promysla No.5 neftepromyslovogo upravleniya
Tuymazaneft'.
                    (Tuymazy region—oil well pumps)

VALEYEV, N.G.

> Provide good efficient machinery for underground repair work.
> Neft.khoz. 41 no.10:50-53 O '63.   (MIRA 17:4)

VALEYEV, N.M., student VI kursa

Physical education as a health factor in the schedule of students'
summer camps. Zdrav. Ros. Feder. 4 no. 10:36-38 O '60.
(MIRA 13:10)

1. Iz Bashkirskogo meditsinskogo instituta (direktor - dotsent
N.F. Vorob'yev).
(STUDENTS—RECREATION)   (PHYSICAL EDUCATION AND TRAINING)

VALEYEVA, R.Kh.

Some procedural problems in the legal protection of wages during the execution of judicial decisions. Uch.zap.LGU no.274:98-111 '59.   (MIRA 13:5)
(Executions(Law)) (Wages)

VALEYEV, R.M.

Characteristics of the development and growth of spring wheat, oats and barley sown in winter and in spring. Nauch. dokl. vys. shkoly; biol. nauki no.4:128-132 '64.   (MIRA 17:12)

1. Rekomendovana kafedroy fiziologii rasteniy Bashkirskogo gosudarstvennogo universiteta im. 40-letiya Oktyabrya.

VALEYEV, R.N.

Tectonic pattern and the history of the geological development
of the Kirov-Kazan trough. Izv. vys. ucheb. zav.; neft' i gaz
4 no.11:11-15 '61.   (MIRA 17:2)

1. Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-
Lenina.

VALEYEV, R.N.; TROYEPOL'SKIY, V.I.

Tectonic characteristics and oil potential of the Tatar Arch.
Izv. vys. ucheb. zav.; neft' i gaz 5 no.6:9-14 '62.   (MIRA 16:5)

1. Kazanskiy gosudarstvennyy universitet imeni V.I.Ul'yanova-Lenina.
(Tatar A.S.S.R.—Petroleum geology)

ELLERN, S.S.; PEN'KOV, I.N.; SITDIKOV, B.S.; VALEYEV, R.N.; MATYAYEVA, K.I.

Association of hydrothermal carbonate, bitumen, and sulfides
in the Devonian of the northern part of the Kazan-Kirovo
trough. Dokl.AN SSSR 145 no.5:1123-1126 '62.   (MIRA 15:8)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.
Predstavleno akademikom N.M.Strakhovym.
                (Kirov Province--Petrology)

ELLERN, S.S.; VALEYEV, R.N.

The main Devonian trench of the East European Platform. Dokl. AN
SSSR 146 no.5:1168-1171 O '62.   (MIRA 15:10)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina
Predstavleno akademikom D.I.Shcherbakovym.
                    (Russian Platform—Geology, Structural)

ELLERN, S.S.; VALEYEV, R.N.; SITDIKOV, B.S.

Some characteristics of the distribution of Devonian volcanic
formations in the eastern part of the Russian Platform. Sev.geol.
6 no.8:66-77 Ag '63.
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Nylga trough in the western part of the Udmurt A.S.S.R. Izv.vys. ucheb.zav.; geol. i razv. 8 no.1:35-44 Ja '65.   (MIRA 18:3)

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AID P - 5056

Subject   :   USSR/Engineering-Welding

Card 1/1   Pub. 107-a - 5/9

Authors   :   Tret'yakov, F. E., A. B. Karan and S. M. Valeyev

Title   :   Arc-welding of thin steel plates with a CO_2 shield

Periodical   :   Svar. proizv., 20-22, My 1956

Abstract   :   The authors present the results of their experimental
                   research on automatic and manual carbon dioxide arc
                   welding of steel plates 1 to 3 mm thick, carried out at
                   the "Elektrik" (Electrician) Plant (Leningrad). The
                   ADS-1000-2 welder was used, some other equipment and
                   electrodes were described. Five tables, 2 diagrams,
                   2 graphs, 3 photos, and GOST standards.

Institutions: Scientific Research Institute of Aviation Technology
                   (NIAT), All Union Scientific Research Institute of the
                   Autogenous Treatment of Metals (VNIIAvtogen).

Submitted   :   No date

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"Technology of Welding Steel Alloys in Gas Shields,"

paper presented at All-Union Scientific-Technical Conference on Welding in Shielding Gases, Leningrad, Dec 1957.

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Anodic oxidation of a metal with texture. G. S. Vozdvizhenskil, S. Sh. Valeev, and T. N. Grechukhina (Kazan Branch Acad. Sci. U.S.S.R.), Zhur. Fiz. Khim. 25, 87-02(1951); cf. C.A. 43, 5677b; 44, 7105e.—The influence of the metal texture on its anodic oxidation is demonstrated for Al, duralumin, Cu, and Fe by measuring the porosity of the oxide film on samples polished with sand paper (I) or mechanically (II) or electrochemically (III). The porosity as given by the drop method and(or) by the electrochem. method (Akimov and Palcolog, C.A. 40, 7011[7]) decreases in the order I, II, III. The no. of pores is always larger on planes perpendicular to the draw axis than on planes parallel to it, except on Cu after long (45 min.) anodic oxidation for which the reverse is true. There are more pores in films of annealed duralumin than in the quenched samples.
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Corn varieties of the Kazan Plant-Breeding Station. Agrobiologiia
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USSR/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44053

Author   : Valeyev, Sh.

Inst   : Tatar Republic State Agricultural Experimental Station.

Title   : On the Agrochuy of Corn Cultivation in Tortaria.

Orig Pub : Byul. nauchno-tekhn. inform. Tatarsk. resp. gos. s.-kh.
             opytn. st., 1957, No 1, 15-20

Abstract : This is a report of results of 1954-1956 experiments in
             the study of the effect on the corn yield of fertilizers,
             periods of sowing, depth of the seeds, beds and the densi-
             ty of the plants standing in the cluster, and sowing me-
             thods.

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A.S., tekhn. red.

[Obtaining high corn yields] Opyt polucheniia vysokikh urozhaev ku-
kuruzy. Pod red. T.V.Kuramshina. Kazan', Tatarskoe knizhnoe izd-
vo, 1959. 181 p.

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S.I.; VAKHMINA, L.S.; KARAVAYEVA, G.V.; IVANOVSKIY, A.K.; ZHIMHINA,
G.Ye.; SOLOV'YEVA, G.M.; ANDRIYANOVA, M.V.; AKHMETOVA, V.M.;
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